What is claimed is:

1. A test apparatus for a control unit, comprising:

simulating means for simulating a target to be controlled by said control unit; and

testing means for testing the operation of said control unit based on a relationship between a pattern signal input to said control unit and an output signal output from said simulating means in response to said pattern signal, wherein

said testing means tests the operation of said control unit at predetermined timing and, if a decision is not obtained that said control unit is operating properly, retries said decision a predetermined number of times.

2. A pattern signal creating apparatus for creating a pattern signal, comprising:

first function processing means for creating said pattern signal based on a control interval at which to control a unit that uses said pattern signal created by said pattern signal creating apparatus; and

second function processing means for creating said pattern signal based on an interval different from said control interval.

3. A pattern signal creating apparatus as claimed in claim 2, wherein said second function processing means creates said pattern signal based on an interval of time that extends over a plurality of said control intervals.

4. A pattern signal creating apparatus as claimed in claim 3, wherein said second function processing means creates said pattern signal based on intervals equal to each of said control intervals.

5. A pattern signal creating apparatus for creating a pattern signal, comprising:

means for creating a correlation pattern signal for which correlation information relative to a reference pattern signal is specified; and

display means for displaying said reference pattern signal and said created correlation pattern signal on the same screen.

6. A pattern signal creating apparatus for creating a pattern signal, comprising:

display means for displaying, when there exists a correlation pattern signal for which correlation information relative to a reference pattern signal is specified, said reference signal and said correlation pattern signal on the same screen; and

pattern signal interlinking changing means for changing said correlation pattern signal in interlinking fashion as said reference pattern signal changes, wherein

when said reference pattern signal is edited, said display means redisplays said correlation pattern signal changed by said pattern signal interlinking changing means along with said edited reference pattern signal.

7. A test program creating apparatus for creating a test program for testing a diagnostic function by causing a control unit to output data, comprising:

means for displaying said pattern signal to be processed in said control unit onto a screen; and

means for enabling a setting to be made for said testing of said diagnostic function with said pattern signal displayed on said screen.

8. A test program creating apparatus as claimed in claim 7, wherein said setting for said testing of said diagnostic function involves setting data output request information to be transmitted to said control unit and also setting a condition based on which to determine whether said diagnostic function is working properly or not when said data output request information is transmitted to said control unit.

9. A test program creating apparatus for creating a test program, comprising:

a child project which contains a pattern signal to be input to a control unit and a condition for effecting a transition from said pattern signal to another pattern signal;

a parent project which contains said child project and a condition for effecting a transition from said child project to another child project;

display means for simultaneously displaying an edit screen for said child project and an edit screen for said parent project;

first editing means for enabling contents of said child project to be edited by displaying said contents on said edit screen for said child project when said child project is selected from said edit screen displayed for said parent project on said display means; and

second editing means for enabling contents of said child project to be edited by displaying setup information relating thereto on a new edit screen when said contents of said child project are selected from said edit screen displayed for said child project on said display means.

10. A test apparatus for a control unit, comprising:

testing means for testing the operation of said control unit based on a relationship between a pattern signal input to said control unit and an output signal output in response to said pattern signal from a target being controlled by said control unit; and

means for causing said testing means during execution of said pattern signal to switch to the execution of another pattern signal when a pattern signal transition condition for making a transition to the execution of said other signal holds.

11. A test method for testing the operation of a control unit, comprising:

a simulating step for simulating a target

to be controlled by said control unit; and

a testing step for testing the operation of said control unit based on a relationship between a pattern signal input to said control unit and an output signal output in said simulating step in response to said pattern signal, wherein

said testing step tests the operation of said control unit at predetermined timing and, if a decision is not obtained that said control unit is operating properly, retries said decision a predetermined number of times.

12. A pattern signal creating method for creating a pattern signal, comprising:

a first function processing step for creating said pattern signal based on a control interval at which to control a unit that uses said pattern signal; and

a second function processing step for creating said pattern signal based on an interval different from said control interval.

13. A pattern signal creating method as claimed in claim 12, wherein said second function processing step creates said pattern signal based on an interval of time that extends over a plurality of said control intervals.

14. A pattern signal creating method as claimed in claim 13, wherein said second function processing step creates said pattern signal based on an interval equal to each of said control intervals.

15. A pattern signal creating method for creating a pattern signal, comprising:

a step for creating a reference pattern signal;

a step for creating a correlation pattern signal for which correlation information relative to said reference pattern signal is specified; and

a displaying step for displaying said reference pattern signal and said created correlation

pattern signal on the same screen.

16. A pattern signal creating method for creating a pattern signal, comprising:

a displaying step for displaying, when there exists a correlation pattern signal for which correlation information relative to a reference pattern signal is specified, said reference signal and said correlation pattern signal on the same screen;

a pattern signal interlinking changing step for changing said correlation pattern signal in interlinking fashion as said reference pattern signal changes; and

a step for redisplaying, when said reference pattern signal is edited, said correlation pattern signal changed in said pattern signal interlinking changing step along with said edited reference pattern signal.

17. A test program creating method for creating a test program for testing a diagnostic function by causing a control unit to output data, comprising:

a step for displaying said pattern signal to be processed in said control unit onto a screen; and

a step for enabling a setting to be made for said testing of said diagnostic function.

18. A test program creating method as claimed in claim 17, wherein said setting for said testing of said diagnostic function involves setting data output request information to be transmitted to said control unit and also setting a condition based on which to determine whether said diagnostic function is working properly or not when said data output request information is transmitted to said control unit.

19. A test program creating method for creating a test program comprising a child project which contains a pattern signal to be input to a control unit and a condition for effecting a transition from said pattern signal to another pattern signal and a parent project

which contains said child project and a condition for effecting a transition from said child project to another child project, said method comprising;

a displaying step for simultaneously displaying an edit screen for said child project and an edit screen for said parent project;

a first editing step for enabling contents of said child project to be edited by displaying said contents on said edit screen for said child project when said child project is selected from said edit screen displayed for said parent project in said displaying step; and

a second editing step for enabling contents of said child project to be edited by displaying setup information relating thereto on a new edit screen when said contents of said child project are selected from said edit screen displayed for said child project in said displaying step.

20. A test method for testing the operation of a control unit based on a relationship between a pattern signal input to said control unit and an output signal output in response to said pattern signal from a target being controlled by said control unit, said method comprising;

a step for executing said pattern signal; and

a step for switching, during execution of said pattern signal, to the execution of another pattern signal when a pattern signal transition condition for making a transition to the execution of said other signal holds.